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/* Objective function */
max: +5 x12 +3 x13 +4 x24 +2 x25 +3 x35 +x46 +4 x47 +6 x57 +2 x58 +5 x69
+4 x79 +7 x89;

/* Constraints */
node1: +x12 +x13 <= 1;
node2: +x12 -x24 -x25 <= 0;
node3: +x13 -x35 <= 0;
node4: +x24 -x46 -x47 <= 0;
node5: +x25 +x35 -x57 -x58 <= 0;
node6: +x46 -x69 <= 0;
node7: +x47 +x57 -x79 <= 0;
node8: +x58 -x89 <= 0;
node9: +x69 +x79 +x89 = 1;

/* Variable bounds */
x12 <= 1;
x13 <= 1;
x24 <= 1;
x25 <= 1;
x35 <= 1;
x46 <= 1;
x47 <= 1;
x57 <= 1;
x58 <= 1;
x69 <= 1;
x79 <= 1;
x89 <= 1;

/* Integer definitions */
int x12,x13,x24,x25,x35,x46,x47,x57,x58,x69,x79,x89;

```